

REMARKS

Entry of the foregoing amendments is respectfully requested. Claims 1, 17 and 20 have been amended. Claims 1-20 are currently pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the foregoing amendments and the remarks that follow.

1. Rejections Under 35 U.S.C. § 102

In the Office Action, the Examiner has rejected claims 1-5, 7-10 and 16 under 35 U.S.C. 102(b) as being anticipated by Lishanski et al., U.S. Patent 6,364,622 (the '622 patent).

Applicants respectfully traverse the Examiner's rejections to claims 1-5, 7-10 and 16 based on the '622 patent. More specifically, claim 1 requires that the vibration generating mechanism, the pumping chamber and the rod connecting the mechanism and the pumping chamber each are disposed within a single housing. Further, claim 1 as amended requires that the pumping chamber include a fluid inlet and a fluid outlet that each extend from the chamber outwardly through the single housing, with the fluid inlet adapted to be inserted within a fluid to be pumped to draw the fluid through the fluid inlet into the pumping chamber disposed within the housing. This is because the purpose of the mechanism, in addition to moving a desired amount of fluid from one location to another, is to form a unitary device capable of being quickly and easily connected to various fluid containers

In contrast, the '622 patent shows an apparatus that includes a vibration generation mechanism, a pumping chamber and a rod connecting the mechanism and the chamber, but these components are each disposed within three separate housings, namely the enclosure for the generator 10, the pump case 2 and the inlet sleeve 8. Therefore, the apparatus disclosed in the '622 patent does not include the single housing for each of the vibration generating mechanism, the pumping chamber and the rod as required by claim 1. In addition, as discussed in the '622 patent in Col. 2, lines 65-67, the entire pump case 2, i.e., the pumping chamber, is directly inserted into the liquid to be pumped. As a result, the device of the '622 patent also does not

disclose a fluid inlet adapted to be inserted into a fluid to be pumped to draw the fluid into the pumping chamber within the housing, as required by claim 1.

As a result, the subject matter of claim 1 is neither shown nor described by the '622 patent, such that claim 1 and claims 2-5, 7-10 and 16, which each depend from claim 1, are allowable. Therefore, applicants respectfully request that the Examiner withdraw the rejections to claims 1-5, 7-10 and 16 based on the '622 patent.

2. Claim Rejections Under 35 USC § 103

a) Claim 6

In the Office Action, the Examiner has rejected claim 6 under 35 USC § 103(a) as being unpatentable over the '622 patent in view of Lishanski et al., U.S. Patent 6,428,289 (the '289 patent).

Applicants respectfully traverse the Examiner's rejection of claim 5 based on the '622 patent in view of the '289 patent. As stated previously, the '622 patent does not disclose the single housing for each of the components of the pump as required by claim 1, from which claim 6 depends.

The '289 patent is unable to overcome this deficiency of the '622 patent. More specifically, the '289 patent discloses an apparatus including a vibration generating mechanism, a pumping chamber and a rod or shaft connecting the mechanism to the chamber. However, the vibration generating mechanism has an enclosure 25 that houses a vibration generator 20, but the remaining parts of the vibration generating mechanism are located outside of the enclosure 25. Further, similarly to the '622 patent, the '289 patent discloses a device in which the pump housing 40 is to be inserted directly into the fluid to be pumped. (Col. 2, lines 34-37). Thus, the '289 also does not disclose a mechanism including a fluid inlet adapted to be inserted within the fluid to be pumped to draw the fluid into the pumping chamber within the housing as required by claim 1. As a result, the subject matter of claim 1, from which claim 6 depends, is not shown or suggested by the combination of the '622 and '289 patents.

As a result, claim 6 is allowable based on its dependency from claim 1 and applicants respectfully request that the Examiner withdraw the rejection to claim 6.

b) Claims 11-15, 17 and 20

In the Office Action, the Examiner has rejected claims 11-15, 17 and 20 under 35 USC § 103(a) as being unpatentable over the '622 patent in view of Pilolla et al., U.S. Patent 4,938,384 (the '384 patent).

Applicants respectfully traverse the Examiner's rejections of claim 11-15, 17 and 20 based on the '622 patent in view of the '384 patent. With this response, claim 17 has been amended with this response to specify that the enclosure in which the vibration generating mechanism, the pumping chamber and the rod is a unitary enclosure. Further, claim 20 has been amended to recite a pumping chamber that includes an enclosure having a fluid outlet extending through the enclosure and a fluid inlet formed as an inlet tube extending through the enclosure, with the fluid outlet having an inner end in the enclosure and an outer end outside of the enclosure. The fluid inlet is also adapted to be inserted into a fluid to be pumped to draw the fluid into the pumping chamber within the enclosure. The pumping chamber also has a rod disposed within the enclosure that is engageable with a vibration generating mechanism at one end, and that has a plate at the opposite end that is engageable with the inner end of the fluid outlet.

In contrast, claims 11-15 depend ultimately from claim 1, which as discussed previously, is allowable in light of the '622 patent which does not disclose the single housing for each of the components of the pump, or the fluid inlet adapted to be inserted within the fluid to be pumped to draw the fluid into the pumping chamber within the housing, as required by claim 1.

The '384 patent is unable to overcome this deficiency of the '622 patent. More specifically, the '384 patent discloses an apparatus having a spout 10 forming the fluid outlet that is releasably secured to a cylindrical housing 66 in which the pump 14 and fluid inlet are located. As such, the apparatus does not include a housing in which the vibration mechanism, pumping chamber, fluid inlet and fluid outlet are positioned as required by claim 1.

In addition, the combination of the pumping devices of the '622 patent and the '384 patent would not be obvious to a person of ordinary skill in the art. This is because the structure and operation of the pump in the '622 patent is accomplished in a valve-less manner by the

continuous operation of a vibration mechanism connected to the pumping chamber, thus providing a continuous vacuum force in the mechanism to draw a continuous stream of the fluid into the device when in operation. In contrast, the device of the '384 patent operates to dispense a predetermined amount of a fluid from the device using only one or two operation cycles of the pump, such that a continuous oscillating of the pump mechanism would not fit with the purpose of the pump of the '384 patent. Additionally, the '384 patent device includes a pair of check valves 74 and 92 therein, which completely eliminates the potential for a vacuum force generated by the operation pump to continuously draw fluid into the device, as is required for the operation of the pump in the '622 patent. Thus, the significant differences in the structure and corresponding methods of operation of the pumping devices of the '622 and '384 patents teach directly away from one another, such that a person of ordinary skill in the art would not combine the '622 patent and the '384 patent in any manner, much less to arrive at the invention of claim 1, which is not accomplished even with the combination of these references.

Therefore, the subject matter of claim 1, which is incorporated into each of claims 11-15, is not shown or suggested by the combination of the '622 and '384 patents, such that claims 11-15 are allowable based on their dependency from claim 1.

For the same reasons, namely, because the '622 and '384 patents do not disclose the unitary housing required by claim 17, the subject matter of claim 17 is not shown or suggested by the combination of the '622 and '384 patents, such that claim 17 is allowable.

Finally, neither the '622 or '384 patents disclose a pumping chamber having a fluid outlet with an inner end in the enclosure and an outer end outside of the enclosure, in conjunction with a plate on a rod in the enclosure that is engageable with the inner end of the fluid outlet. Therefore, the subject matter of claim 20 is neither shown nor suggested by the combination of the '622 and '384 patents, such that claim 20 is allowable.

As a result, applicants respectfully request that the Examiner withdraw the rejection to claims 11-15, 17 and 20.

c) Claims 18 and 19

In the Office Action, the Examiner has rejected claims 18 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the '622 and '384 patents in view of the '289 patent.

Applicants respectfully traverse the Examiner's rejections to claims 18 and 19 based on the '622, '384 and '289 patents. More specifically, as stated previously, the '622 and '384 patents do not disclose or suggest the subject matter of claim 17, from which both claim 18 and 19 depend.

The '289 patent is unable to cure this deficiency. In particular, the '289 patent discloses an apparatus including a vibration generating mechanism, a pumping chamber and a rod or shaft connecting the mechanism to the chamber. However, the vibration generating mechanism has an enclosure 25 that houses a vibration generator 20, but the remaining parts of the vibration generating mechanism are located outside of the enclosure 25. As a result, the subject matter of claim 17, which requires the components of the pump all be positioned within a unitary housing, and from which claims 18 and 19 depend, is not shown or suggested by the combination of the '622 and '289 patents.

As a result, claims 18 and 19 are allowable based on their dependency from claim 17 and applicants respectfully request that the Examiner withdraw the rejection to claims 18 and 19.

CONCLUSION

It is submitted that claims 1-20 satisfy the requirements of 35 U.S.C. §§ 102 and 103 and each define patentable subject matter. A Notice of Allowance is therefore respectfully requested.

No fees are believed to be required with this response. However, authorization is given to charge any additional fees or credit any overpayment in connection with this or any future communication to Deposit Account No. 50-1170.

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The Examiner is invited to contact the undersigned by telephone if it would help expedite the allowance of this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mathew E. Corr', written in a cursive style.

Mathew E. Corr
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Dated: May 21, 2007

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